

REMARKS

In response to the Office Action mailed September 2, 2008, Applicant respectfully requests reconsideration. To further the prosecution of this Application, Applicant submits the following remarks. The claims as now presented are believed to be in allowable condition.

Claims 1 and 58-129 are pending in this Application. Claims 1, 66, 78, 81, 88, 96, 99, 108, 118, 121, 122, and 125 are independent claims.

Claim Objections

Claims 66-80, 88-98, 108-120, and 122-126 were objected to. The Office Action asserts on page 19 that the term "cluster-capable" can be interpreted as an intended use which is a non-positive recitation of a claim limitation. Claims 66, 78, 88, 96, 108, 118, 122, and 125 have been amended to positively and recite the devices as configured to operate as part of a cluster. The amendments to the claims should in no way be construed as an acquiescence to the objections and was done solely to expedite prosecution of the Application. Support for the amendments can be found in the Specification, such as on page 50, line 4 through page 51, line 9, for example. The amendments do not add new matter to the Application and do not raise new issues requiring further search and consideration. Accordingly, the objection to claims 66-80, 88-98, 108-120, and 122-126 should be withdrawn.

Rejections under §102 and §103

Claims 1, 58-73, 75-77, 81-95, 99-113, 115-117, 121-124 and 127-129 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,018,137 to Backes et al. (hereinafter Backes) in view of U.S. Patent No. 5,574,860 to Perlman et al. (hereinafter Perlman). Claims 74 and 114 were rejected under 35 U.S.C. §103(a) as being unpatentable over Backes in view of Perlman and in further view of U.S. Patent No. 5,809,483 to Broka et al.

(hereinafter Broka). Claims 78-80, 96-98, 118-120 and 125-126 were rejected under 35 U.S.C. §102(b) as being anticipated by Backes.

Applicant respectfully traverses each of these rejections and requests reconsideration. The claims are in allowable condition.

Independent claims 1, 66, 81, 88, 99, 108, 121, and 122 were rejected as being unpatentable over Backes in view of Perlman. Taking claim 1 as an example, claim 1 relates to a method for discovering and configuring network devices into a cluster, the method comprising automatically detecting candidate devices by receiving discovery packets from the candidate devices, the candidate devices periodically transmitting the discovery packets, determining whether any of the candidate devices is qualified to join the cluster by applying qualification rules to the discovery packets received from the candidate devices, and presenting to a user a list of the candidate network devices that are qualified to join the cluster.

The Office Action has rejected claims 1, 66, 81, 88, 99, 108, 121, and 122 were rejected as being unpatentable over Backes in view of Perlman. However, Applicant's claims 1, 66, 81, 88, 99, 108, 121, and 122 are patentable over Backes in view of Perlman because neither Backes nor Perlman teaches or suggests all of the elements of the claims. For example, neither Backes nor Perlman teaches or suggests a method for discovering and configuring network devices into a cluster comprising "determining whether any of the candidate devices is qualified to join the cluster by applying qualification rules to the discovery packets received from the candidate devices," as claimed by the Applicant.

Backes relates to a method for improving communication among end nodes in a collection of networks connected to a plurality of end nodes and to at

least one of a plurality of bridges used to forward messages in a time sequence between the end nodes. Column 3, lines 55-59. In Backes, the method includes selecting one of the bridges connected to each network as a designated bridge for that network to forward messages to and from that network. The remaining bridges connected to that network which are not selected as a designated bridge are deemed daughter bridges. Column 3, lines 60-65.

As indicated in Backes, in the selection process, bridges exchange configuration messages, called bridge protocol data units (BPDUs), with the other bridges connected to the same network. Column 6, lines 10-14. Next in Backes, each bridge evaluates the BPDUs from the other bridges to choose a designated bridge and daughter bridges for each network. Column 7, lines 18-20. For example, as recited in Backes:

[p]referably, while the bridges are exchanging BPDU's, all bridges connected to the same network compare root path costs, which are concurrently being determined in a manner described above. The bridge with the lowest root path cost is deemed to be the designated bridge for that network. If multiple bridges have the same root path cost, then some technique, such as use of the bridge identifier is used to select the designated bridge. All of the bridges connected to a network which do not have another path to the root, and are not selected to be a designated bridge are deemed to be daughter bridges. Column 7, lines 27-37.

The Office Action on page 2 equates the discovery packets claimed by the Applicant with the BPDUs recited by Backes. Accordingly, while Backes describes the exchange of BPDUs among bridges in a network, Backes does not teach or suggest "determining whether any of the candidate devices is qualified to join the cluster by applying qualification rules to the discovery packets received from the candidate devices," as claimed by the Applicant. Instead, the bridges in Backes select one of the network bridges as the designated bridge based upon the BPDUs (i.e., the Applicant's discovery packets as claimed) where the

designated bridge for a network is operable forward messages to and from that network

Furthermore, based upon the configuration of the network in Backes, the exchange of BPDUs among bridges in a network and the subsequent evaluation of the BPDUs by the bridges teaches away from "determining whether any of the candidate devices is qualified to join the cluster" by applying qualification rules to the discovery packets received from the candidate devices," as claimed by the Applicant.

For example, in the rejection of claim 62 on page 3, the Office Action recites that "only members of the network send the BDPUs" consequently they cannot be members of another spanning tree or cluster." As such, the Office Action indicates that, in Backes, only the bridges that form part of a network (i.e., a cluster as claimed by the Applicant) transmit BDPUs (i.e., discovery packets) to other bridges of the network. Accordingly, Backes does not provide an indication of determining whether any of the candidate devices (i.e., bridges of Backes) is qualified to join the cluster (i.e., the network of Backes) by applying qualification rules to the discovery packets (i.e., the BPDUs of Backes) received from the candidate devices, as claimed by the Applicant, because each bridge in Backes must **already be a member of a network** (i.e. cluster) in order to send the BDPUs to the other bridges of the network. Because the bridges in Backes must be part of the network in order to exchange BDPUs, there is no need for the bridges in Backes to examine the BDPUs to determine whether the bridges can join the network, such as claimed by the Applicant.

Accordingly, because each network bridge in Backes can only receive BDPUs from other bridges in that network, Backes teaches away from determining whether any of the candidate devices (i.e., bridges of Backes) is qualified to join the cluster (i.e., the network of Backes) by applying qualification

rules to the discovery packets (i.e., the BPDUs of Backes), as claimed by the Applicant

Furthermore, Perlman does not cure the deficiencies of Backes. Perlman relates to techniques for stations or nodes connected to a network to be aware of each others' connection to and departure from the network. Column 1, lines 7-9. Perlman, however, is silent regarding a method for discovering and configuring network devices into a cluster comprising "determining whether any of the candidate devices is qualified to join the cluster by applying qualification rules to the discovery packets received from the candidate devices," as claimed by the Applicant.

For the reasons stated above, claims 1, 66, 81, 88, 99, 108, 121, and 122 patentably distinguishes over the cited prior art, and the rejection of claims 1, 66, 81, 88, 99, 108, 121, and 122 under 35 U.S.C. §103 (a) should be withdrawn. Accordingly, claims 1, 66, 81, 88, 99, 108, 121, and 122 are in allowable condition. Because claims 58-65 and 127 depend from and further limit claim 1, claims 58-65 and 127 are in allowable condition for at least the same reasons. Because claims 67-77 depend from and further limit claim 66, claims 67-77 are in allowable condition for at least the same reasons. Because claims 82-87 and 128 depend from and further limit claim 81, claims 82-87 and 128 are in allowable condition for at least the same reasons. Because claims 89-95 depend from and further limit claim 88, claims 89-95 are in allowable condition for at least the same reasons. Because claims 100-106 and 129 depend from and further limit claim 99, claims 100-106 and 129 are in allowable condition for at least the same reasons. Because claims 109-117 depend from and further limit claim 108, claims 109-117 are in allowable condition for at least the same reasons. Because claims 123 and 124 depend from and further limit claim 122, claims 123 and 124 are in allowable condition for at least the same reasons.

The Office Action has rejected claims 78, 96, 118, and 125 under 35 U.S.C. §102(b) as being anticipated by Backes. Taking claim 78 as an example, claim 78 relates to a method for discovering candidate network devices to be configured into a cluster of network devices and managed via a commander network device, the method comprising periodically transmitting discovery packets from the candidate network devices, the discovery packets including information indicating that the candidate network device is configured to operate as part of the cluster of network devices, maintaining, at each of the candidate network devices, a neighbor device database containing information about other candidate network devices directly connected to the candidate network device, and transmitting the information in the neighbor device database to the commander network device when the candidate network device is added to the cluster, all communication with network devices in the cluster being through a single network address assigned to the commander network device.

The Office Action has rejected claims 78, 96, 118, and 125 as being anticipated by Backes. However, Applicant's claims 78, 96, 118, and 125 are patentable over Backes because Backes does not teach or suggest all of the elements of the claims. For example, Backes does not teach or suggest "transmitting the information in the neighbor device database to the commander network device when the candidate network device is added to the cluster, all communication with network devices in the cluster being through a single network address assigned to the commander network device" as claimed by Applicant.

As indicated above, each bridge in Backes must already be a member of a network in order to send the BDPUs to the other bridges of the network. While Backes describes the exchange of "correspondence between the end nodes connected to each subset of nontruncated networks and the truncated networks associated with the same forwarding group as that subset (column 9, lines 51-

62). Backes is silent regarding “transmitting the information in the neighbor device database to the commander network device when the candidate network device is added to the cluster, all communication with network devices in the cluster being through a single network address assigned to the commander network device.” If the rejection is to be maintained, Applicant respectfully requests that it be pointed out with particularity where Backes teaches “transmitting the information in the neighbor device database to the commander network device when the candidate network device is added to the cluster, all communication with network devices in the cluster being through a single network address assigned to the commander network device,” as claimed by the Applicant.

For the reasons stated above, claims 78, 96, 118, 125 patentably distinguishes over the cited prior art, and the rejection of claims 78, 96, 118, 125 under 35 U.S.C. §103(b) should be withdrawn. Accordingly, claims 78, 96, 118, 125 are in allowable condition. Because claims 79 and 80 depend from and further limit claim 78, claims 79 and 80 are in allowable condition for at least the same reasons. Because claims 97 and 98 depend from and further limit claim 96, claims 97 and 98 are in allowable condition for at least the same reasons. Because claims 119 and 120 depend from and further limit claim 118, claims 119 and 120 are in allowable condition for at least the same reasons. Because claim 126 depends from and further limits claim 125, claim 126 is in allowable condition for at least the same reasons.

-25-

Conclusion

In view of the foregoing remarks, this Application should be in condition for allowance. A Notice to this effect is respectfully requested. If the Examiner believes, after this Response, that the Application is not in condition for allowance, the Examiner is respectfully requested to call the Applicant's Representative at the number below.

Applicant hereby petitions for any extension of time which is required to maintain the pendency of this case. If there is a fee occasioned by this Response, including an extension fee, please charge any deficiency to Deposit Account No. 50-3661.

If the enclosed papers or fees are considered incomplete, the Patent Office is respectfully requested to contact the undersigned collect at (508) 616-2900, in Westborough, Massachusetts.

Respectfully submitted,

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Attorney Docket No.: 1004-231.001

Dated: December 2, 2008